of illustrative discussion of the embodiments of the present invention only and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the present invention. In this regard, no attempt is made to show structural details of the present invention in more detail than is necessary for the fundamental understanding of the present invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the present invention may be embodied in practice.

[0052] Figure 1 schematically illustrates a sectional view of a headbox 1, which includes a feeding device 2 for feeding a fibrous stock suspension 3. Feeding device 2 is embodied or formed as a crosswise dispersing pipe 4, however, it may include a central disperser having feeding pipes as well. Headbox 1 is further provided with a device for producing micro-turbulences (i.e., a "turbulence generator") 5 across a width of the machine, with a pre-chamber 6 arranged across the width of the machine, and arranged upstream, relative to a flow direction S (arrow), of the fibrous stock suspension 3. Accordingly, turbulence generator 5 can include a multitude of lines and columns next to one another and variously structured turbulence pipes 5.2 positioned above one another. In flow direction S (arrow) of fibrous stock suspension 3 downstream from turbulence generator 5, a nozzle 7 across the width of the machine is provided for dispersing fibrous stock suspension 3 between two wires (i.e., lower wire 8.1, upper wire 8.2) of a gap former 9, which is not shown in greater detail. In another embodiment, fibrous stock suspension 3 may be dispersed onto only one wire of a continuous wire or hybrid former. Two lamellae 10.1 and 10.2 across the width of the machine are provided in nozzle 7 of headbox 1.

[0053] According to the invention, the two lamellae 10.1 and 10.2 are constructed of at least one high-performance polymer 11, have high stability, high

heat resistance, and good to very good resistance to alkaline solutions and/or acids.

[0054] High-performance polymer 11 has a tensile strength R_m (DIN 53455) in the range of about 50 N/mm^2 to about 150 N/mm^2, preferably about 70 N/mm^2 to about 110 N/mm^2, and a breaking elongation A_s (DIN 53455) in the range of about 20 % to about 80 %, preferably about 30 % to about 60 %. Furthermore, high-performance polymer 11 has a modulus of elasticity E (DIN 53457, ISO 527-2) in the range of about 500 N/mm^2 to about 10,000 N/mm^2, preferably about 1,000 N/mm^2 to about 5,000 N/mm^2.

[0055] Moreover, high-performance polymer 11 has an impact strength when notched (ISO 179) of about 40 kJ/m^2 to about 100 kJ/m^2, preferably about 45 kJ/m^2 to about 90 kJ/m^2, in order to allow the connection of lamellae 10.1 and 10.2 to turbulence generator 5 to be constructed in a smaller fashion.

[0056] In order to decisively improve the properties of lamellae 10.1 and 10.2 regarding moisture and water (hydrolysis resistance), high-performance polymer 11 has a moisture acceptance FA (ISO 62) in the range of about 0.05 % to about 2 %, preferably about 0.2 % to about 1.2 %.

[0057] Under the aspect of cleaning technology, high-performance polymer 11 of lamellae 10.1 and 10.2 has a heat resistance WB (DIN 59461) in the range of about 120°C to about 230°C, preferably about 170°C to about 220°C, and a good to very good resistance to alkaline solution, because having these values the performance of the cleaning of headbox 1 is possible by "boil out", i.e., the presence of temperatures in the range of about 100°C and, simultaneously, the use of sodium hydroxide (NaOH) of about 20%.

[0058] In order to ensure the dimensional stability of lamellae 10.1 and 10.2 during operation as well, high-performance polymer 11 has a low swelling Q, in particular a low linear swelling Q_L, preferably in the range of about 0.02% to about

0.2%.

[0059] Polyphenylene sulphone (PPSU), polyether sulphone (PES), polyetherimide (PEI), and polysulphone (PSU), which perform the given tasks in operation and during cleaning of a headbox in an excellent fashion are recommended among the group of high-performance polymers 11.

[0060] Advantageously, lamellae 10.1 and 10.2 are constructed in a homogenous design made from one high-performance polymer each. The use of different high-performance polymers is certainly possible as well.

[0061] Furthermore, it is discernible from Figure 1 that lamella 10.1, provided with a dull lamella end, is jointedly mounted at its end 12.1 to turbulence generator 5 and lamella 10.2, provided with a sharp lamella end, is mounted in as stationary manner to turbulence generator 5 by its end 12.2. However, in another embodiment the mounted lamella ends may be positioned in turbulence generator 5 as well, i.e., between two respective rows of turbulence pipes 5.2.

[0062] In order to take into account present and future requirements of production with regard to the production amount and the like, headbox 1 is designed for jet speeds v_s (arrow) greater than about 1,500 m/s, preferably greater than about 1,800 m/s, considering aspects of hydraulics and flow technology.

[0063] The schematic perspective view of Figure 2 shows a headbox embodied or formed as a multi-layered headbox 1.1 having feeding devices 2, 2.1, 2.2, which are only schematically shown, for introducing different fibrous stock suspensions 3, 3.1, 3.2. Nozzle 7 is limited in a known fashion by two flow guidance walls 13.1, 13.2 over the width of the machine. These walls are each connected to a central, stationary separation wall 14 by a known turbulence generator 5, 5.1. A separating lamella 16 is pivotally mounted on the distributing end of separating wall 14 by a joint 15. Alternatively, separating lamella 16 may also be mounted in a stationary manner